

BY: Aaron Hottenstein Division: P068 Highway Traff GMA Emp

1. GENERAL
THIS PROJECT INVOLVES INSTALLATION OF APS/CPS PEDESTRIAN EQUIPMENT ON THE NORTH, SOUTH, AND WEST LEGS OF THE INTERSECTION OF MD 28 (DARNESTOWN ROAD) AT MUDDY BRANCH ROAD IN MONTGOMERY COUNTY. MD 28 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

THIS INTERSECTION OPERATES IN A NEMA EIGHT-PHASE SEMI-TRAFFIC-ACTUATED MODE. THERE ARE EXCLUSIVE/PERMISSIVE LEFT-TURN PHASES FOR EASTBOUND AND WESTBOUND MD 28 WITH OVERLAPPING RIGHT-TURN PHASES FOR NORTHBOUND AND SOUTHBOUND MUDDY BRANCH ROAD. BOTH MUDDY BRANCH ROAD APPROACHES OPERATE CONCURRENTLY WITH A LEADING EXCLUSIVE LEFT-TURN PHASE FOR THE SOUTHBOUND APPROACH. CONCURRENT PEDESTRIAN PHASES ARE PROVIDED ACROSS THE NORTH AND SOUTH LEGS WITH THE MD 28 THROUGH MOVEMENTS. AN ALTERNATIVE PEDESTRIAN PHASE IS PROVIDED ACROSS THE WEST LEG OF THE INTERSECTION.

NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTONS TO CROSS THE NORTH, SOUTH, AND WEST LEGS OF THE INTERSECTION ARE TO BE PROVIDED. WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

NORTH: "WAIT TO CROSS MUDDY BRANCH AT DARNESTOWN, WAIT."
SOUTH: "WAIT TO CROSS MUDDY BRANCH AT DARNESTOWN, WAIT."
WEST: "WAIT TO CROSS DARNESTOWN AT MUDDY BRANCH, WAIT."

WHEN THE WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

MS. ANYESHA MOOKHERJEE (MO)
ASSISTANT DISTRICT ENGINEER - TRAFFIC
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MS. CORREN JOHNSON
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. VICTOR GRAFTON
DISTRICT ENGINEER - UTILITIES
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MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
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MR. DUANE BERNARD
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MR. EUGENE BAILEY
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MR. ROBERT RICKETTS
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MR. MIKE STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

MR. KAMAL HAMUD
MONTGOMERY COUNTY-TRAFFIC ENGINEERING
PHONE NUMBER 301-777-8761

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING
STANDARD PLATES FOR TRAFFIC CONTROL: MD 104.03-11, MD 104.04-13 THROUGH MD 104.04-16.

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	48	SF	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN
			M1-5(6) (24"x48"), 1 EA. 8 SF
			R3-5(L) (30"x36"), 1 EA. 8 SF
			D-3(1) (VAR.X16"), 4 EA. 32 SF

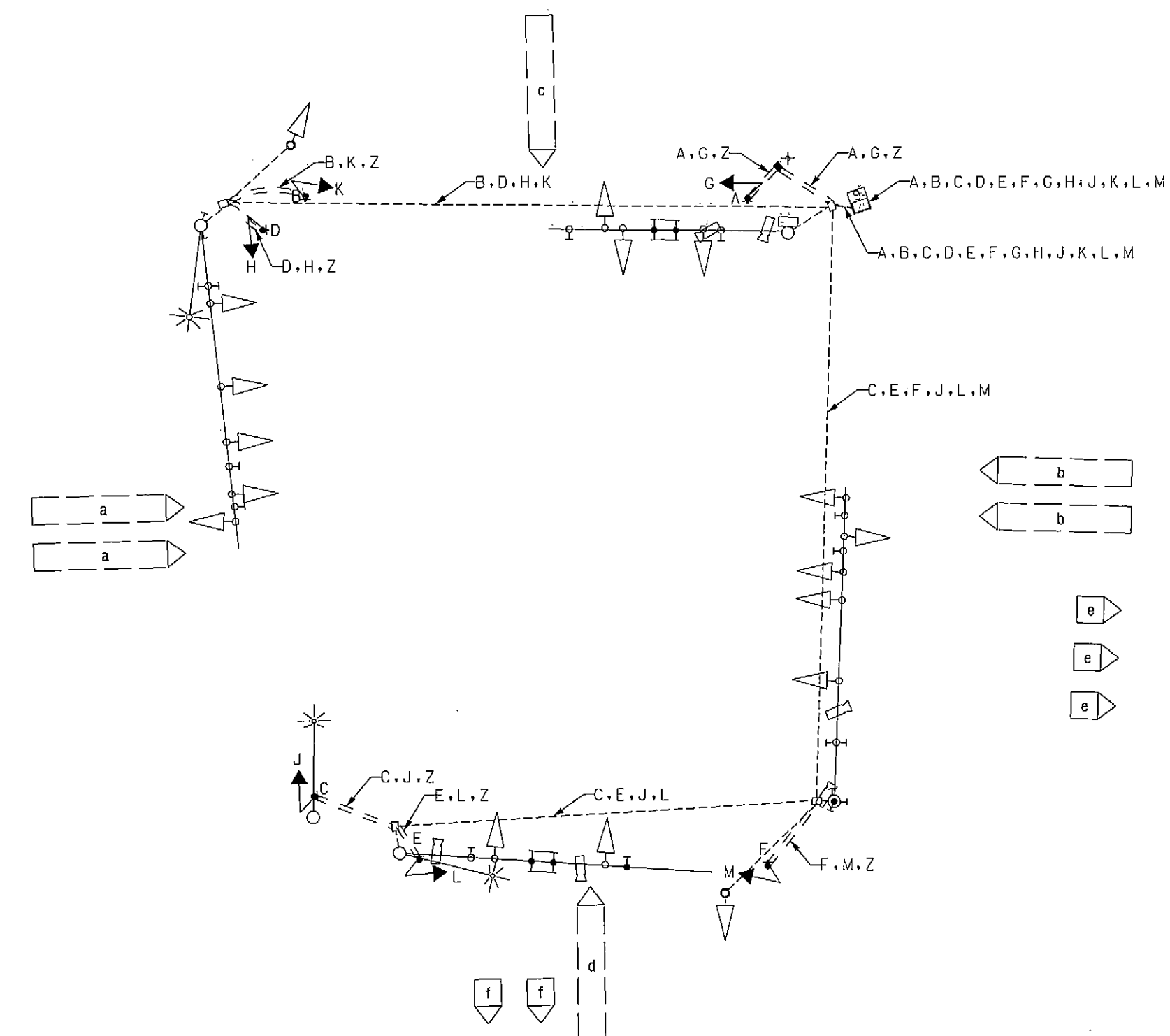
000000	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	40	CY	CLASS 2 EXCAVATION
203030	3	CY	TEST PIT EXCAVATION
504150	1	TON	HOT MIX ASPHALT SUPERPAVE 9.5MM FOR SURFACE, PG76-22, LEVEL-3
520109	2	SY	3 INCH GRADED AGGREGATE BASE COURSE
585621	580	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	580	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	125	LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	105	LF	TYPE A CURB ANY HEIGHT OR DEPTH
651015	1615	SF	5 INCH CONCRETE SIDEWALKS
655120	100	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	8	SY	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
705500	8	SY	TURFGRASS ESTABLISHMENT
800000	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	2	EA	ADJUST HANDHOLE TO GRADE AND REPLACE FRAME AND COVER
800000	6	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	6	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	6	EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	100	LF	4 INCH SCHEDULE 40 CONCRETE RING (C/WIT-FRENCHED)
800000	53	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN INCLUDING ALL HARDWARE
800000	1	EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	100	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
811001	1	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
861105	1100	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1130	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

PHASE 1 & 5	+G-	+G-	-R-	R	R	+G-	+G-	+G-	R	R	R G+	R	R G+	R	R G+	R	R G+	DW	DW	DW	DW	DW
1 & 5 CHANGE	CONTROLLER MAY CHANGE TO PHASE 1 & 6 OR PHASE 2 & 5 OR PHASE 2 & 6.																					
PHASE 1 & 6	+G-	+G-	+G-	G	G	+R-	+R-	+R-	R	R	R	R	R	R	R G+	R	R G+	DW	DW	DW	DW	DW
1 & 6 CHANGE	+Y-	+Y-	+Y-	Y	Y	+R-	+R-	+R-	R	R	R	R	R	R	R Y+	R	R Y+	DW	DW	DW	DW	DW
PHASE 2 & 5	+R-	+R-	-R	R	R	+G-	+G-	+G-	G	G	R G+	R	R G+	R	R	R	R	DW	DW	DW	DW	DW
2 & 5 CHANGE	+R-	+R-	-R	R	R	+Y-	+Y-	+Y-	Y	Y	R Y+	R	R Y+	R	R	R	R	DW	DW	DW	DW	DW
PHASE 2 & 6	+R-	+R-	-R	G	G	+R-	+R-	+R-	G	G	R	R	R	R	R	R	R	WK	WK	WK	DW	DW
PED CLEAR	+R-	+R-	-R	G	G	+R-	+R-	+R-	G	G	R	R	R	R	R	R	R	FLOW	FLOW	FLOW	FLOW	DW
2 & 6 CHANGE	+R-	+R-	-Y	Y	Y	+R-	+R-	+R-	Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW	DW
PHASE 4 & 7	+R-	+R-	-R	R	R	+R-	+R-	+R-	R	R	R	R	R	R	+GG	G	+GG	G	DW	DW	DW	DW
4 & 7 CHANGE	+R-	+R-	-R	R	R	+R-	+R-	+R-	R	R	R	R	R	R	+YY	Y	+YY	Y	DW	DW	DW	DW
PHASE 4 & 8	+R-	+R-	-R	R	R	+R-	+R-	+R-	R	R	G	G	G	G	G	G	G	DW	DW	DW	DW	DW
4 & 8 CHANGE	+R-	+R-	-R	R	R	+R-	+R-	+R-	R	R	Y	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW
PHASE ALT. 4 & 8	+R-	+R-	-R	R	R	+R-	+R-	+R-	R	R	G	G	G	G	G	G	G	DW	DW	DW	WK	WK
PED CLEAR	+R-	+R-	-R	R	R	+R-	+R-	+R-	R	R	G	G	G	G	G	G	G	DW	DW	DW	FLOW	FLOW
ALT. 4 & 8 CHANGE	+R-	+R-	-R	R	R	+R-	+R-	+R-	R	R	Y	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW
FLASHING OPERATION	FLAR	FLAR	FLAR	FLY	FLY	FLAR	FLAR	FLAR	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK	DARK



A,B,C,D,E,F - ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
G,H,J,K,L,M - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
Z - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE.
+ - GROUND ROD



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 28 (DARNESTOWN ROAD) AT

MUDDY BRANCH ROAD
ROCKVILLE, MARYLAND

SCALE N.T.S. ADVERTISED DATE MARCH 2013 CONTRACT NO. XY1515185

DESIGNED BY AMH/JVB COUNTY MONTGOMERY

DRAWN BY JVB LOGMILE 15002817.77

CHECKED BY JFL TMS NO. L735

F.A.P. NO. _____ TOD NO. _____

TELEPHONE NO.	TELEPHONE NO.	TELEPHONE NO.
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TS NO.1915E GI	DRAWING SG-3 OF 3	SHEET NO. 18 OF 24
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PLOTTED: "08:01 AM on Tuesday, April 16, 2013"
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